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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,947	05/22/2001	Joachim Gloger	510.1007	9743

7590 04/08/2003

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EXAMINER	
TANG, SON M	

ART UNIT	PAPER NUMBER
2632	7

DATE MAILED: 04/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/862,947	GLOGER ET AL.	
	Examiner	Art Unit	
	Son M Tang	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 17-19* is/are rejected.

7)☒ Claim(s) *16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1- 9, 12-15 and 17-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshioka et al. [US 6,035,053].

Regarding to claim 1: Yoshioka et al. disclose a method for detecting road users and obstacles as function of camera images [3] and laser radar [2] so as to determine their distance from an observer and to classify them, comprising the steps of:

-identifying regions is met by the subjects in a forward scene that scans within a two-dimensional camera image [3], in order to recognize the subject image, the camera is marking around that image and then ranging the subject image by the laser radar [2], then the subject recognition process is processing the data from camera and radar to provide the type of subject [as shown in Fig. 1-3 and col. 3, lines 53-68, col. 4, lines 1-36 and specifically lines 20-37]. Yoshioka et al. silence to use classifier type to detecting road users and obstacles. However, It would have been obvious to one having ordinary skill in the art can be use other part available (such as recognition process) for achieve the same result.

Regarding to claim 15: Yoshioka et al. disclose a device for detecting road users and obstacles as a function of camera images to determine their distance from an observer, and to classify them, comprising,

-a distance measuring sensor unit [laser radar 2];

-a mono-image camera [3] coupled to the laser radar;

-a first classifying unit is met by the processed image data of variables of the road conditions [col. 4, lines 6-14];

-a second classifying unit is met by the subject recognition [S2] is downstream from the radar unit and the camera.

Yoshioka et al. fail to specify that a first classifying unit interposed between the sensor unit and the camera. It would have been obvious that the first classifying unit is processing before the distance determination, because the camera have to scan at the image subject as a target first, then it can be able to measure the distance of that subject target, because there are multiple subjects in the region, and the first classifying unit is recognizing which subject is a target subject then determines the distance.

Regarding to claims 2, 9: Yoshioka et al. disclose a CCD type video camera [3], since it is only one camera, it is obviously generates two-dimensional image.

Regarding to claims 3, 6-8 : Yoshioka et al. disclose the distance measuring using a radar sensor, but fail to disclose of using camera system to measuring distance. However, it is obvious of matter of design choice to use a well-known concept of using stereo-camera system for estimating the distance for reducing part such as radar sensor.

Regarding to claim 4-5: Yoshioka et al. disclose a box algorithm met by electronic control unit (ECU) for marking regions (as described in claim 1) and recognizing road users and obstacles. Yoshioka et al. does not specific disclose a hyperpermutation network system. However, it is obvious of matter of design choice to one having ordinary skill in the art at the

time the inventions was made to employ any known network system in the invention, as long as the system functions and performs well. Further more, the claimed hyperpermutation network is not support by any evidence fact to show that the system is performing better.

Regarding to claims 17-19: Yoshioka et al. further disclose a device and method in a vehicle for early detection of accident [Fig. 1-3] and a risk calculator [s7] is connected to the output of the second classifying unit which met by [s2] .

Regarding to claims 12-13: As stated by Yoshioka et al. in claim 1 above, the camera scans the regions then marks the subjects and ranging with relative velocity in relation to the vehicle for recognizing [as cited in col. 4, lines 6-68].

Regarding to claim 14: Yoshioka et al. further disclose wherein the result of the recognition is transmitted to a warning stage as cited in col. 2, lines 51-68].

Claims **10- 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshioka et al. [US 6,035,053] in view of Nishio [US 5,541,590].

Regarding to claims 10-11: Yoshioka et al. disclose the instant claimed invention except for: a radial-basis function and a support vector machine. Nishio teaches a system that uses neural networks for classifying the possibility of crash, the system inheres of a radial-basis function and support vector machine. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a neural network as suggested by Nishio into the system of Yoshioka for the advantage of accurate.

Allowable Subject Matter

3. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M Tang whose telephone number is (703)306-5970. The examiner can normally be reached on 4/9 First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (703)308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3988 for regular communications and (703)305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Son Tang
April 5, 2003

DANIEL J WU
PRIMARY EXAMINER
4/06/03